

CLAIMS

1. An amplifier system (1) for satellites including:

- first and second amplifier modules (A_1 , A_2) each having an input and an output,

5 - a signal divider (D) having an input, a first output, and a second output,

- a signal combiner (C) having a first input, a second input and an output,

said first output of said divider (D) being connected to said input of said first amplifier module (A_1) via a connection length Le_1 , said second output of said divider (D) being connected to said input of said second amplifier module (A_2)

10 via a connection length Le_2 , said output of said first amplifier module (A_1) being connected to said first input of said combiner (C) via a connection length Ls_1 , said output of said second amplifier module (A_2) being connected to said second input of said combiner (C) via a connection length Ls_2 , and said connection

length satisfying the equation $Le_1 + Ls_1 = Le_2 + Ls_2$, which system is characterized in that the connection length Ls_1 is different from the connection

15 length Ls_2 .

2. An amplifier system (1) for satellites according to claim 1 characterized in that said length Le_1 is equal to said length Ls_2 and said length Le_2 is equal to said length Ls_1 .

20 **3.** An amplifier system (1) for satellites according to either claim 1 or claim 2 characterized in that at least one of said amplifier modules (A_1 , A_2) is a traveling wave tube amplifier.

4. An amplifier system (1) for satellites according to claim 1 characterized in that at least one of said amplifier modules is a semiconductor SSPA.

25 **5.** An amplifier system (1) for satellites according to claim 1 characterized in that the connections between the outputs of said amplifier modules and the input of said combiner are waveguides.

6. An amplifier system (1) for satellites according to claim 1 characterized in that at least one of said amplifier modules (2) includes:

30 - first and second amplifier submodules (A_1 , A_2) each having an input and an output,

- a signal divider (d) having an input, a first output, and a second output, and

- a signal combiner (c) having a first input, a second input, and an output,

35 said first output of said divider (d) being connected to said input of said first

- 5 amplifier submodule (A_1) via a connection length Le_{11} ,
 said second output of said divider (d) being connected to said input of said
 second amplifier submodule (A_2) via a connection length Le_{12} ,
 said output of said first amplifier submodule (A_2) being connected to said first
 input of said combiner via a connection length Le_{11} ,
 said output of said second amplifier submodule being connected to said second
 input of said combiner via a connection length Le_{12} ,
 said connection lengths satisfying the equation $Le_{11} + Le_{11} = Le_{12} + Le_{12}$, and the
 connection length Le_{11} being different from the connection length Le_{12} .